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Java1450 Sprite Animation, Part 1

Programming in Java doesn't have to be dull and boring. In fact, it's possible to have a lot of fun while programming in Java. This is the first lesson in a miniseries that will concentrate on having fun while programming in Java.

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Preface

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Java1452 Sprite Animation, Part 2

Baldwin shows you how to instantiate and use a MediaTracker object to track the loading status of Image objects. He shows you how to use the getImage method of the Toolkit class to create Image objects from GIF files, how to register those Image objects on a MediaTracker object, and how to use the waitForID method of the MediaTracker object to force the program to block and wait until the images in a group are successfully loaded, or until a loading error occurs.

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Java1454 Sprite Animation, Part 3

In this lesson, Baldwin discusses the unusual nature of the getter methods for the width and height properties of an Image object. He introduces and briefly discusses the concept of an ImageObserver object in conjunction with the getWidth and getHeight methods of an Image object. He shows you how to set the size of a Frame to be the same as the size of a background image in the Frame. He discusses the use of an object of the controlling class as an animation thread.

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Java1456 Sprite Animation, Part 4

Baldwin explains the behavior of the run method of the animation thread as well as the makeSprite method of the controlling class. He provides a preview of the SpriteManager class and the Sprite class. He discusses the repaint, update, and paint methods of the Component class, and discusses the timer loop used in this program. He also suggests an alternative approach that makes use of a Timer object to fire Action events. Finally, he recaps the previous three lessons in the series.

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Java1458 Sprite Animation, Part 5

Baldwin shows you how to override the update method of the Component class to improve the animation quality of the program over what would normally be achieved using the default version of the update method. In the process, he shows you how to eliminate the flashing that often accompanies efforts to use the default version of the update method for animation purposes. He also shows you how to get and use an offscreen drawing context to accomplish double buffering in the drawing process.

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Java1460 Sprite Animation, Part 6

In his continuing series on sprite animation, Baldwin explains the behavior of each of the methods of his SpriteManager class. This includes the following features: finding an empty location for each new sprite, updating sprite positions, drawing the new scene during each animation cycle, and managing collisions between sprites.

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Java1462 Sprite Animation, Part 7

Baldwin completes his sprite-animation program. Along the way, he explains the methods of the Sprite class, including the following features: establishing the initial position of the sprite, determining the location of the sprite, determining the speed and direction of the sprite, updating the sprite's position, implementing some randomness in the sprite's motion, bouncing off the walls, drawing the sprite, and detecting collisions with other sprites.

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Java1464 Frame Animation

Baldwin shows you how to achieve frame animation in Java. He accomplishes this by showing you how to upgrade the sprite animation program from the earlier lessons into a new program that provides both sprite animation and frame animation.

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Java1466 Animated Sea Worms

Baldwin wraps up his series of lessons on animation. He has shown you how to use Java to write programs that produce smooth animation of the sprite animation and frame animation varieties. It's time for you to take that knowledge and do something fun with it. And don't forget, Java programming can be fun.

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Java1470 Frame Animation, Part 2

Baldwin teaches you how to do frame animation. Equally important, he also teaches you about event-driven programming, multi-threaded programming, ordinary inner classes, anonymous inner classes, exception handling, and image icons.

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Java1480 Biomorphs and Artificial Life

Baldwin shows you how to write an artificial life program that models selective breeding, sometimes referred to as artificial selection.

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Java1516 Introduction to Alice Programming

Baldwin reviews a major 3D interactive graphics Java program named Alice that is used to teach beginners how to program.

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Affiliation : I am a professor of Computer Information Technology at Austin Community College in Austin, TX.

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